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Academic Qualifications

2013.09~2017.06

BSc in Applied Geophysics
Guilin University of Technology

2017.09~2020.08

MSc in Applied Geophysics
Zhejiang University
Supervisor: Assoc. Prof. Bangbing Wang

Research field: Impedance inversion with adaptive genetic algorithm and its application in Antarctica ice sheet exploration

2020.09~2025.10

PhD student in Earth and Planetary Sciences
Macau University of Science and Technology/State Key Laboratory of Lunar and Planetary Sciences
Supervisor: Prof. Yi Xu

Research field: Permittivity estimation with adaptive genetic algorithm and its application in detection of lava tubes

Research Interests

Impedance inversion, Genetic Algorithm, Multi-polarization radar

Research project

Project of National Natural Science Foundation of China: Research of joint constraints ice pattern with isochronous layer and ice fabric (41676181), participation, 2017.1 ~ 2020.12

The Science and Technology Devel

opment Fund of Macau: 2D Inversion Based on Adaptive Genetic Algorithm and Its Application in Detecting Lunar Lava Tubes (0014/2025/STT), host, 2026.1~2028.12

Publications

1. Wang, B., & **Wong, H.** (2020). Analytic Solutions to Reflection-Transmission Problem of Interface in Anisotropic Ice Sheet. *International Journal of Antennas and Propagation*, 2020.
2. Lai, J., Xu, Y., Bugiolacchi, R., **Wong, H. K.**, Xu, L., Zhang, X., ... & Di, K. (2021). A complex

- paleo-surface revealed by the Yutu-2 rover at the lunar farside. *Geophysical Research Letters*, 48(20), e2021GL095133.
3. Zhang, L., Xu, Y., Chen, R., Wong, H. K., Lai, J., Meng, X., ... & Liu, C. (2022). Calculation of dielectric constant, loss property and scattering characteristics from the future martian GPR data. *Icarus*, 386, 115181.
 4. Chen, R., **Wong, H.**, Xu, Y., & Zhang, L. (2023, December). Fully polarized ground penetrating radar imaging and scattering information extraction. In *IET International Radar Conference (IRC 2023)* (Vol. 2023, pp. 2611-2616). IET.
 5. **Wong, H. K.**, Xu, Y., Wang, B., Chen, R., & Meng, X. (2024). Permittivity estimation with Adaptive Genetic Algorithm and its application in the detection of lava tubes. *IEEE Transactions on Geoscience and Remote Sensing*, 4513512.
 6. Yi, Xu., Rui, Chen., **Honkuan, Wong.**, Xindong, Meng., Yiping, Chen., Ling, Zhang., ... & Long, Xiao. (2024). Analog Study of Ground-Penetrating Radar Technology for Lava Tube Detection. *Journal of Deep Space Exploration*, 11(4), 365-373.
 7. Xu, X., Xu, Y., Han, Z., **Wong, H.**, Meng, X., Zhao, Y. Y. S., ... & Jin, S. (2025). Shallow Water Ice Detection From SHARAD Data in Central Utopia Planitia, Mars. *Journal of Geophysical Research: Planets*, 130(1), e2023JE008145.
 8. Chen, R., Xu, Y., Liu, R., **Wong, H.**, Qin, Y., Meng, X., ... & Zhang, L. (2025). Underground Characteristics Extraction Method Using the Fully Polarized Subsurface Penetrating Radar of Zhurong Rover. *IEEE Transactions on Geoscience and Remote Sensing*, 5106815.